where $q \neq 8$ for $p + q = 14, 16, 18$ or 20, if neither of the radicals R_1 and R_2 is a radical

of the formula (XI) or (XIII), or if A is a radical of the formula (VIII),

with the proviso that when A is a radical of the formula (VIII), $p + q$ is not 12, 13, 14 or

15.--

REMARKS

In the Office Action dated July 11, 2002, claims 1-15 and 33, in the above-identified U.S. patent application were rejected. Reconsideration of the rejections is respectfully requested in view of the above amendments and the following remarks. Support for new claims 43, 44 and 45 can be found in the specification at pages 10-16, 39-48 and 54-58.

The office action indicates that an abstract on a separate sheet is required. An abstract on a separate sheet is attached to the present response.

Claims 1-4, 10, 12, 14 and 33 were rejected under 35 USC§102(b) as anticipated by AT 393505. Claim 1 has been amended to clarify that when A is a radical of the formula (VIII) and $p + q$ is 12, q is not 4. Support for this amendment can be found in the specification at pages 39 and 40 which shows compounds where $p + q$ is 12. In view of the amended claims, applicants request that this rejection be withdrawn.

Claims 1-15 and 33 were rejected under 35 USC §103 as unpatentable over AT 393505 and EP 534,445 independently. Applicants respectfully contend that it would not have been obvious to select specific compounds among the numerous compounds taught by the prior art since the prior art does not provide any guidance or suggestion leading to the compounds of the present invention. Applicants point out that formula I

of AT 393505 covers millions of compounds, many of which fall outside the scope of the present claims (e.g. when X is NH or NR_2, with R_2 being C1-C8 alkyl or C2-C8 halogenated alkyl; when Y is NH; or when R_1 is a C2-C8 alkyl group substituted by halogen, amino or C1-C6-alkylamino). In order to arrive at the compounds of the present invention, a person of ordinary skill in the art would have to select, among the very broad teachings of AT 393505 without any guidance. For example, one would have to choose: X as O from X being O, NH or NR_2, with R_2 encompassing numerous alternatives as C1-C8 alkyl or C2-C8 halogenated alkyl;

Y as O from Y being O or NH;

R_1 as unbranched C1-C8 alkyl, or unbranched C2-C8 alkyl substituted by N-methyl-N-C1-C3-alkylamino, N-methyl-N-C1-C3-alkyl-N-C1-C8-n-alkylamino or hydroxyl from R_1 being C1-C8 alkyl, or C2-C8 alkyl substituted by di-C1-C6-alkylamino, tri-C1-C6-alkylamino, hydroxyl, halogen, amino or C1-C6-alkylamino; and

R as a monounsaturated unbranched C12-C24 hydrocarbon alkyl having a structure of A in claim 1 from R being a saturated or unsaturated hydrocarbon radical with 12 to 24 carbon atoms.

Since X, Y, R_1 and R in formula I of AT 393505 encompass millions of possible combinations, it would not have been obvious to arrive at the compounds of the present claims unless AT 393505 provided some suggestion or guidance for making the selections. Applicants point out that among the millions of compounds covered by formula I of AT 393505, only two of the compounds (examples 13 and 14) are even similar to the presently claimed invention and in both example 13 and 14, R_1 is cholinyl, which corresponds to z being 0, x being 1, m being 1, R_3 being methyl and n being 2.

Thus, AT 393505 provides guidance only for compounds where R_1 is cholinyl when R is a monounsaturated hydrocarbon radical.

Claims 1-15 and 33 were also rejected as lacking an inventive step over EP 534,445 on the grounds that the compounds taught by EP 534,445 are similar to the claimed compounds. EP 534,445 discloses phosphocholines useful in the treatment of protozoal diseases, in which R^1 of EP 534,445 is a saturated, monounsaturated or polyunsaturated hydrocarbon radical having 12 to 20 carbon atoms. The cholinyl portion corresponds to "A" in claim 1 and R^1 corresponds to "B" in claim 1. R^1 is very broadly defined. The only monounsaturated R^1 groups exemplified by EP 534,445 were oleyl (i.e. cis-9-octadecenyl as in Example 13 of AT '505) and elaidyl (i.e. trans-9-octadecenyl). Applicants contend that numerous compounds are encompassed by EP 534,445 and there is no suggestion that the compounds can or should be modified as in the present invention. It is well known that similar compounds can have significant differences in biological activity and thus without a suggestion as to how the prior art compounds should be modified, applicants contend that the presently claimed invention would not have been obvious over the cited prior art. In addition, EP 534,445 does not suggest or disclose compounds where A is a radical of the formula (VIII), z is 0, x is 1, m is 1, and R_3 is an alkyl radical having 1 C atom which is not substituted by a hydroxy group, and n is not 2 or 3, or compounds where A is a radical of the formula (VIII), and p + q is not 12, 13, 14 or 15. In view of the fact that EP 534,445 does not suggest or disclose the modifications necessary to arrive at the presently claimed compounds, applicants request that this rejection be withdrawn.

Applicants respectfully submit that all of claims 1-15 and 33 are now in condition for allowance. If it is believed that the application is not in condition for allowance, it is respectfully requested that the undersigned attorney be contacted at the telephone number below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fee for such an extension together with any additional fees that may be due with respect to this paper, may be charged to Counsel's Deposit Account No. 02-2135.

Respectfully submitted,

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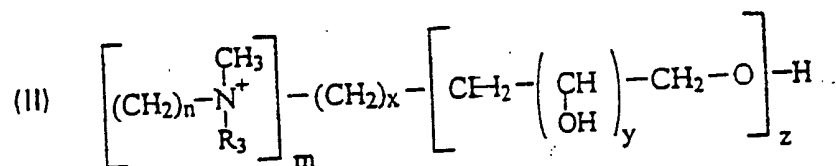Telephone: 202/783-6040
Telefax: 202/783-6031

MCK/cb

1. (Amended) A compound of the general formula (I)

(I) A – PO_3 - B

in which B is a radical of the general formula (II)

$$(II) \quad \left[(CH_2)_n - \overset{\overset{\displaystyle CH_3}{|}}{\underset{\underset{\displaystyle R_3}{|}}{N^+}} \right]_m - (CH_2)_x - \left[CH_2 - \left(\underset{\underset{\displaystyle OH}{|}}{CH} \right)_y - CH_2 - O \right]_z - H$$
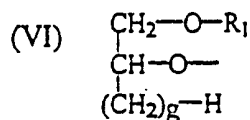
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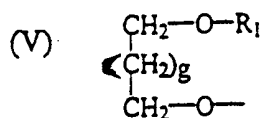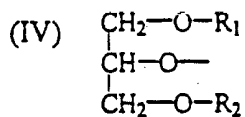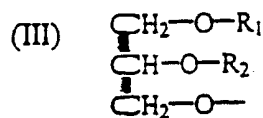
n is an integer from 2 to 8
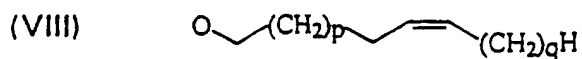
m is 0, 1 or 2:

x is an integer from 0 to 8;

y is an integer from 1 to 4;

z is an integer from 0 to 5;

R_3 is an alkyl radical having 1 to 3 C atoms, which may be substituted by one or

more hydroxyl groups;

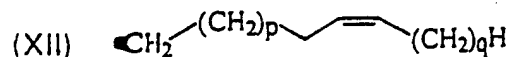and in which A is a radical selected from one of the formulae (III) to (IX):

(III)
$$\begin{array}{l} CH_2{-}O{-}R_1 \\ CH{-}O{-}R_2 \\ CH_2{-}O{-} \end{array}$$

(IV)
$$\begin{array}{l} CH_2{-}O{-}R_1 \\ CH{-}O{-} \\ CH_2{-}O{-}R_2 \end{array}$$

(V)
$$\begin{array}{l} CH_2{-}O{-}R_1 \\ (CH_2)_g \\ CH_2{-}O{-} \end{array}$$

(VI)
$$\begin{array}{l} CH_2{-}O{-}R_1 \\ CH{-}O{-} \\ (CH_2)_g{-}H \end{array}$$

(VII)
$$\begin{array}{l} CH_2{-}O{-} \\ CH{-}O{-}R_1 \\ (CH_2)_g{-}H \end{array}$$

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(VIII) O — $(CH_2)_p$ ═ $(CH_2)_qH$

(IX) O — $(CH_2)_s$ ═ $(CH_2)_t$ ═ $(CH_2)_rH$
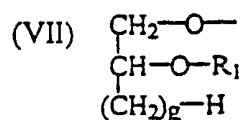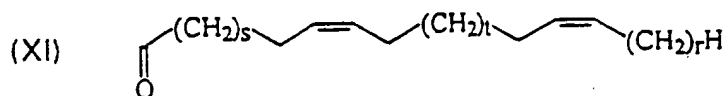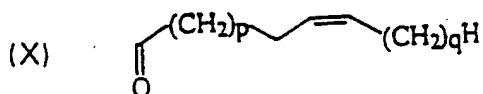
in which

g is an integer from 0 to 8;

$p, q, r, s, t \geq 0$;

$12 \leq p + q \leq 30$ and

$8 \leq s + t + r \leq 26$;

where R_1 and R_2 are each independently hydrogen, a saturated or unsaturated acyl or

alkyl radical or a radical selected from one of the formulae (X), (XI), (XII), and (XIII), and

at least one of R_1 and R_2 is a radical selected from one of the formulae (X), (XI), (XII),

and (XIII):

(X) $(CH_2)_p$ ═ $(CH_2)_qH$ / O

(XI) $(CH_2)_s$ ═ $(CH_2)_t$ ═ $(CH_2)_rH$ / O

(XII) CH_2 — $(CH_2)_p$ ═ $(CH_2)_qH$

(XIII) CH_2 — $(CH_2)_s$ ═ $(CH_2)_t$ ═ $(CH_2)_rH$

where $q \neq 8$ for $p + q = 14$, 16, 18 or 20, if neither of the radicals R_1 and R_2 is a

radical of the formula (XI) or (XIII), or if A is a radical of the formula (VIII),

with the proviso that when A is a radical of the formula (VIII) and p + q is 12, q is

not 4.

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